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### Feature Article - Australian Tourism Satellite Account

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#### INTRODUCTION

In October this year, the Australian Bureau of Statistics (ABS) will be releasing the first Australian Tourism Satellite Account. The reference year for the Tourism Satellite Account will be 1997-98, consistent with the latest complete set of detailed industry and expenditure data available for the whole of the economy. Australia will be one of only a handful of countries to have published a Tourism Satellite Account.

The aim of this article is to inform users about the upcoming release and to provide information on concepts, proposed outputs and potential uses of the data.

#### BACKGROUND

Tourism has long been regarded as an important activity in Australia. The actual contribution of the "tourism industry" to the Australian economy has never been officially measured. In recognition of this and in response to specific calls for information on the economic impacts of tourism, the ABS, with support from the Department of Industry, Science and Resources (DISR), has developed an Australian Tourism Satellite Account.

Implicitly, tourism is already included in the national accounts. The products purchased by visitors and produced by suppliers are all part of core national accounts. However, while all the products that are produced and consumed in meeting tourism demand are embedded in the core accounts, they are not readily apparent because "tourism" is not identified as a conventional industry or product. To overcome this problem, the Tourism Satellite Account identifies the economic aspects of tourism separately, but still within, the core national accounts framework.

A Tourism Satellite Account has been recognised internationally as the optimal method for measuring the economic contribution of tourism and as an important information base for tourism analyses. Importantly, because the Tourism Satellite Account is set in the national accounts framework the relationships between tourism and other economic activity can be studied. Indeed, by framing tourism within the context of the national accounts the estimates and analyses are provided with a credibility in terms of concepts and methods.

#### THE CONCEPT OF A SATELLITE ACCOUNT

The national accounts are a comprehensive set of economic data which are exhaustive and consistent within the boundary of the economic activities they cover. Gross Domestic Product

(GDP) is perhaps the most recognisable and important economic statistic from the national accounts. However, there are certain limitations in what can be accommodated directly in the core national accounting framework. Satellite accounts allow an expansion of the national accounts for selected areas of interest while keeping faith with the concepts and structures of the core accounts.

Satellite accounts present specific details on a particular topic (both in monetary and physical terms) in an account which is separate from, but linked to, the core accounts. Therefore, a “tourism” satellite account presents tourism’s picture within the national accounting framework.

A Tourism Satellite Account contains two dimensions. The first dimension focuses on consumption and output. This will provide a view of the basic economic structure of tourism in terms of supply and demand relationships. Importantly, it will quantify the size of tourism relative to other types of economic activity. The second dimension presents non-monetary data, e.g., employment, overseas arrivals and departures, and visitor characteristics so that they can be related to data in the first dimension.

### **Supply and use framework**

The international tourism standards recognise that a key component of the Tourism Satellite Account is the use of a “supply and use” framework. This framework underlies the estimation of GDP for the whole economy. It shows the supply of goods and services both by domestic industries and from imports. It also shows the use of those goods and services in the economy by domestic industries and final consumers, as well as in exports. As the supply and use tables are a data intensive system, they are produced with a lag – the latest available being in respect of the year 1997-98.

Tourism is essentially a demand based concept. The supply and use framework makes it possible to also examine the supply side of tourism within the context of the production and demand functions of the whole economy, and thus provides valuable information on the contribution of tourism in Australia. It will show tourism’s contribution to GDP and allow comparisons with the non-tourism contribution of “core” industries such as manufacturing and mining.

## **CONCEPTS OF TOURISM**

The concepts and methods used in the Australian Tourism Satellite Account are based on international standards published in Tourism Satellite Account: Methodological References. This document was released in March 2000 as a joint publication by an Inter-Secretariat Working Group on Tourism Statistics. This group is made up of the Organisation for Economic Co-operation and Development (OECD), the Statistical Office of the European Communities (Eurostat), the United Nations (UN), and the World Tourism Organisation (WTO).

### **THE CONCEPT OF A SATELLITE ACCOUNT**

The key concepts of tourism are:

- Tourism comprises the activities of visitors traveling for leisure, business and other purposes.
- Visitors are defined as “any person traveling to a place other than that of his/her usual environment for less than twelve months and whose main purpose of trip is other than the exercise of an activity remunerated from within the place visited” OECD and others (2000),

Tourism Satellite Account: Methodological References, para 2.4).

- Usual environment is made up of a number of areas in which persons undertake regular activities such as their residence, place of work, place of study and other places frequently visited. The usual environment criteria have two dimensions.
- Frequency means places which are visited on a routine basis (at least once a week) are considered part of a person's usual environment, even if the place visited is located a considerable distance from place of residence.
- Distance means locations close (up to 40 kilometres from home for overnight trips and up to 50 kilometres (round trip) from home for day trips) to the place of residence of a person are also included in their usual environment.

Tourism consumption is defined as “the total consumption made by a visitor or on behalf of a visitor for and during his/her trip and stay at the destination” (OECD and others (2000), Tourism Satellite Account: Methodological References, para 3.8). Consistent with the definition of visitors, tourism consumption includes expenditure by business visitors including consumption before or after the trip if the expenditures are related to the trip, such as the purchase of luggage or film processing. However, tourism consumption only includes transactions between a visitor and the business with whom the visitor has direct contact. Tourism consumption also includes an imputation for the value of services visitors directly consume from non-market production, e.g., museums and libraries, even though these may be free or charged at a price which is less than the full cost of production.

## **CONCEPTS OF TOURISM**

Tourism related products are further classified into tourism characteristic products and tourism connected products. Tourism characteristic products are those products which would cease to exist or for which the level of consumption would be significantly reduced in the absence of visitors (e.g., accommodation services). Tourism connected products are those that are consumed by visitors in volumes which are significant for the visitor and/or the provider but are not included in the list of tourism characteristic products (e.g., food products). Tourism related industries are defined along the same lines. [A full list of tourism related industries and products in the Tourism Satellite Account is shown in Appendix 1 of this article.]

## **ESTIMATING THE ECONOMIC CONTRIBUTION OF TOURISM**

The measurement of the economy in a national accounting framework is centred on the concept of economic production.

GDP is the most commonly used measure. National accountants measure GDP in three theoretically equivalent ways: by summing output less intermediate consumption of industries (production approach); by summing incomes flowing from production (income approach); or by summing final expenditures, plus exports, less imports (expenditure approach). The Tourism Satellite Account uses each of these different views of GDP. To derive tourism value added and tourism's contribution to GDP, the Tourism Satellite Account defines the supply and demand sides of the economy from a tourism perspective. Estimates of tourism related supply and demand are built up from a combination of data collections and measures implied from standard national supply and use tables. [For a more detailed explanation of how tourism value added and tourism GDP are derived see Appendix 2 of this article].

## **OUTPUTS OF THE TOURISM SATELLITE ACCOUNT**

The main outputs of the first dimension of the Tourism Satellite Account will be:

- estimates of tourism value added;
- tourism GDP;
- tourism's share of the value-added of major tourism related industries (such as accommodation, restaurants and cafes, air transportation);
- total household and business tourism consumption by type of product;
- consumption by overseas visitors and Australians traveling abroad;
- profits and wages of tourism related industries;
- net taxes on tourism related products; and
- imports of tourism related goods and services.

The second dimension is a data set that enables description of the relationship between economic variables in the first dimension and the following items:

- employment in tourism related industries;
- employment profiles;
- domestic visitor numbers; and
- international inbound and outbound visitor numbers.

## **WHAT CAN THE TOURISM SATELLITE ACCOUNT BE USED FOR?**

The outputs from the Tourism Satellite Account give a good indication of some practical uses of the data. Among other things, the Tourism Satellite Account will provide:

- tourism value added in a framework that integrates tourism with the rest of the economy. This should provide policy makers with an improved measure of the contribution of tourism to the Australian economy and a basis from which to compare the performance of tourism across countries, and with other activities within a country;
- detailed data on visitor consumption and how this consumption is met by domestic supply and imports. For example, the data can show which industries supply particular products to visitors;
- the basic information required for the development of models of the economic impact of tourism. For example, analysts may use data from the Tourism Satellite Account to estimate the effect of changes in tourism consumption on other industries or on employment;
- a link between employment profiles and economic data will provide a valuable data connection for investigation of tourism employment issues;

- a link between economic data and non-monetary information on tourism, such as number of trips, duration of the stay, purpose of the trip, etc; and information on tourism relationships at the national level that may be used to construct models to understand impacts of tourism at a sub-national level.

## **LIMITATIONS OF THE TOURISM SATELLITE ACCOUNT**

The Tourism Satellite Account is a national set of tables only The Tourism Satellite Account will present a comprehensive data set and picture of tourism's contribution to the national economy.

Data limitations on the supply side mean that it has not been possible for tourism satellite accounts by State and Territory to be developed. The ABS is aware that supply and use tables are compiled by agencies in a number of State and Territories. By using these and the general methods adopted for the national Tourism Satellite Account, it may be possible for these agencies to compile their own tourism satellite accounts.

The measure of tourism value added does not include the indirect effects of tourism Tourism value added allows direct comparison of the tourism contribution to GDP with the contribution to GDP from other activities.

It does not measure the indirect effect of tourism in terms of other activities demand for extra commodities or the effect of external impacts on tourism consumption. Indirect tourism demand results from purchases by the producer of products sold to tourists. For example, when a visitor buys a meal from a restaurant, the direct tourism demand is the cost of the meal. The meal's indirect tourism demand is generated from the production of inputs used by the restaurant - e.g., the growing of meat and vegetables used to make the meal, electricity for cooking it, etc. Producers of these inputs have no direct relationship with the visitor.

The sum of the indirect effects of tourism are, however, reflected in the estimates of expenditure on tourism– related products. To show the impacts of these indirect effects throughout the economy, a more comprehensive model is required. The basic information from the Tourism Satellite Account will be available for use in such models.

## **SEMINARS AND FUTURE PLANS**

Following the release of the Tourism Satellite Account in October 2000, the ABS, along with the DISR, plans to provide technical information sessions for users of tourism statistics.

Details of these seminars will be advised in the Tourism Satellite Account release. The production of Future Tourism Satellite Accounts will depend on demand from users and on funding being available for the project.

## **FOR FURTHER INFORMATION**

For further information relating to the Tourism Satellite Account, contact Sean Thompson, Assistant Director, National Accounts Research Section, ABS on telephone (02) 6252 7121 or email at **Sean.Thompson@abs.gov.au**.

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## **Appendix 1:** Australian Tourism Satellite Account - tourism related products and industries

### **PRODUCTS**

- Travel agency and tour operator services
- Taxi fares
- Long distance passenger transportation
- Local area passenger transportation
- Motor vehicle hire and lease
- Fuel (petrol, diesel)
- Repair and maintenance of motor vehicles (incl parts)
- Accommodation services
- Imputed rent on holiday homes
- Takeaway and restaurant meals
- Food products
- Alcohol and other beverages
- Shopping, gifts and souvenirs
- Motor vehicles

- Recreational, cultural and sporting services
- Gambling and betting services
- Education services
- Other tourism goods and services
- Retail margins
- All other goods and services

## **INDUSTRIES**

- Travel agency and tour operator services
- Taxi transport
- Other road transport
- Rail transport
- Water transport
- Air transport
- Motor vehicle hiring
- Automotive fuel retailing
- Accommodation
- Ownership of dwellings
- Cafes, restaurants, and takeaway food outlets
- Food manufacturing
- Beverage manufacturing
- Transport equipment manufacturing
- Other manufacturing
- Retail
- Pubs, taverns and bars
- Casino and other gambling services
- Libraries, museums and arts
- Other entertainment services
- Education
- All other industries

## Appendix 2:

Calculating tourism value added and tourism GDP In order to calculate tourism value– added (TVA), a number of steps are required. These can be summarised as:

- identify which products in the economy are purchased by visitors;
- identify the industries which supply products to visitors;
- determine what proportion of the total supply of each product is consumed by visitors by matching with tourism demand data - this is the tourism product ratio;
- apply the tourism product ratio to the output of each tourism product by each industry to derive tourism output;
- estimate the intermediate consumption required to produce each tourism product by using relationships shown in the supply-use tables;
- calculate TVA at basic prices as tourism output less intermediate consumption for each industry and sum for all industries in the economy. TVA at basic prices is directly comparable to the value added of other industries; then derive Tourism GDP by adding net taxes paid on tourist products (net taxes \* tourism product ratio) to TVA at basic prices.

Tourism GDP is directly comparable to GDP.

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